Dairy Outlook: March 2018

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ARTICLES

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Dairy Market Outlook

Markets continue to move sideways with little prospect for substantial improvement. As you can see from the accompanying tables, the predicted mailbox prices for September-November 2018 are averaging $17.56 / cwt, which is $2.00 /cwt higher than the 2nd quarter of 2018 average mailbox price. If these predicted prices due occur this autumn, it will provide a few months of relief from the punishing low prices currently experienced by dairy producers. These temporary relief is still below the 3 year average breakeven for most Pennsylvania farms.

Dairy producers that have a small land base and need to purchase corn on a regular basis should watch price trends closely. The markets are expecting

corn prices to rise by autumn and through the winter of 18-19. Dairy producers in the Northeast are already at a disadvantage in purchasing corn due to the transportation basis that adds 15-20% to the Chicago market price. So, watch corn closely.

The short rally in the price of soybeans was due to the dry weather in Argentina. However, soybean export sales from the United States have been less than expected, so futures prices have had a clear upper limit.

Cows Hold Steady, Herds Continue Decline, Production Rises

Dairy cow numbers in the United States continue to hold about steady at a 22 year high. However, dairy herds registered to sell milk continue to decline. At the end of 2017, there were 40,219 dairy herds in the nation, a 4% decrease year over year. The Northeast mirrored that trend, with a 4% decrease in herd numbers. At the end of 2017, there were 12,985 herds in the 10 Northeast states.

Interestingly, over 90% of those 12,985 herds were in just three Northeast states: New York, Pennsylvania and Vermont. These three states all lost just 1.4% of their herds last year. Officially, Pennsylvania started 2018 with 6,570 herds.

U.S. milk production continues to rise, January 2018 production was 1.8% over January 2017. This increase in milk production will continue to have a strong negative effect on price, as any increase over 1% is bearish on price when we have limited ability to rapidly increase export markets. Pennsylvania did not follow the national trend, losing 1.4% of milk production from January 2017 to January 2018.

In summary, with cow numbers steady, increasing domestic milk production, limited increases in the short term export market, and a robust inventory of dairy products both domestically and globally, there are no market signals to indicate strength for future milk prices.

Table 1: 12 month Pennsylvania and U.S. All Milk Income, Feed Cost, Income

over Feed Cost ($/milk cow/day)

	PA All Milk Income	PA Feed Cost[1]	PA IOFC	*3 yr avg. breakeven IOFC[2]*	US All Milk Income	US Feed Cost[1]	US IOFC
Feb-17	$ 14.70	$ 4.59	$ 10.11	*$ 8.97*	$ 13.88	$ 3.60	$ 10.27
Mar-17	$ 14.10	$ 4.57	$ 9.53	*$ 8.97*	$ 12.98	$ 3.70	$ 9.27
Apr-17	$ 13.20	$ 4.71	$ 8.49	*$ 8.97*	$ 12.38	$ 3.88	$ 8.50
May-17	$ 13.05	$ 4.58	$ 8.47	*$ 8.97*	$ 12.53	$ 3.98	$ 8.54
Jun-17	$ 13.65	$ 4.48	$ 9.17	*$ 8.97*	$ 12.98	$ 3.92	$ 9.05
Jul-17	$ 13.95	$ 4.89	$ 9.06	*$ 8.97*	$ 12.98	$ 3.95	$ 9.02
Aug-17	$ 14.40	$ 4.55	$ 9.85	*$ 8.97*	$ 13.50	$ 3.76	$ 9.74
Sep-17	$ 14.25	$ 4.42	$ 9.83	*$ 8.97*	$ 13.35	$ 3.80	$ 9.55
Oct-17	$ 13.95	$ 4.35	$ 9.60	*$ 8.97*	$ 13.43	$ 3.84	$ 9.58
Nov-17	$ 14.03	$ 4.61	$ 9.41	*$ 8.97*	$ 13.58	$ 3.74	$ 9.83
Dec-17	$ 13.65	$ 4.56	$ 9.09	*$ 8.97*	$ 12.90	$ 3.78	$ 9.12
Jan-18	$ 12.75	$ 4.58	$ 8.17	*$ 8.97*	$ 12.08	$ 3.87	$ 8.21
Feb-18	$ 12.61	$ 4.56	$ 8.05	*$ 8.97*	$ 11.91	$ 3.86	$ 8.05
Mar-18	$ 12.33	$ 4.58	$ 7.76	*$ 8.97*	$ 11.58	$ 3.85	$ 7.72
12 mo. Avg.	$ 13.81	$ 4.57	$ 9.23		$ 13.04	$ 3.82	$ 9.22
12 mo. change	$ 0.79	$ (0.19)	$ 0.97		$ 0.64	$ 0.07	$ 0.57
% change	6.0%	-3.9%	11.8%		5.2%	1.9%	6.6%

[1]Based on corn, alfalfa hay, and soybean meal equivalents to produce 75 lbs. of milk (Bailey & Ishler, 2007)

[2]The 3 year average actual IOFC breakeven in Pennsylvania from 2014-2016 was $8.97 ± $1.76 ($/milk cow/day) (Beck, Ishler, Goodling, 2017).

Table 2: 12 month Pennsylvania and U.S. All Milk Price, Feed Cost, Milk Margin ($/cwt for lactating cows)

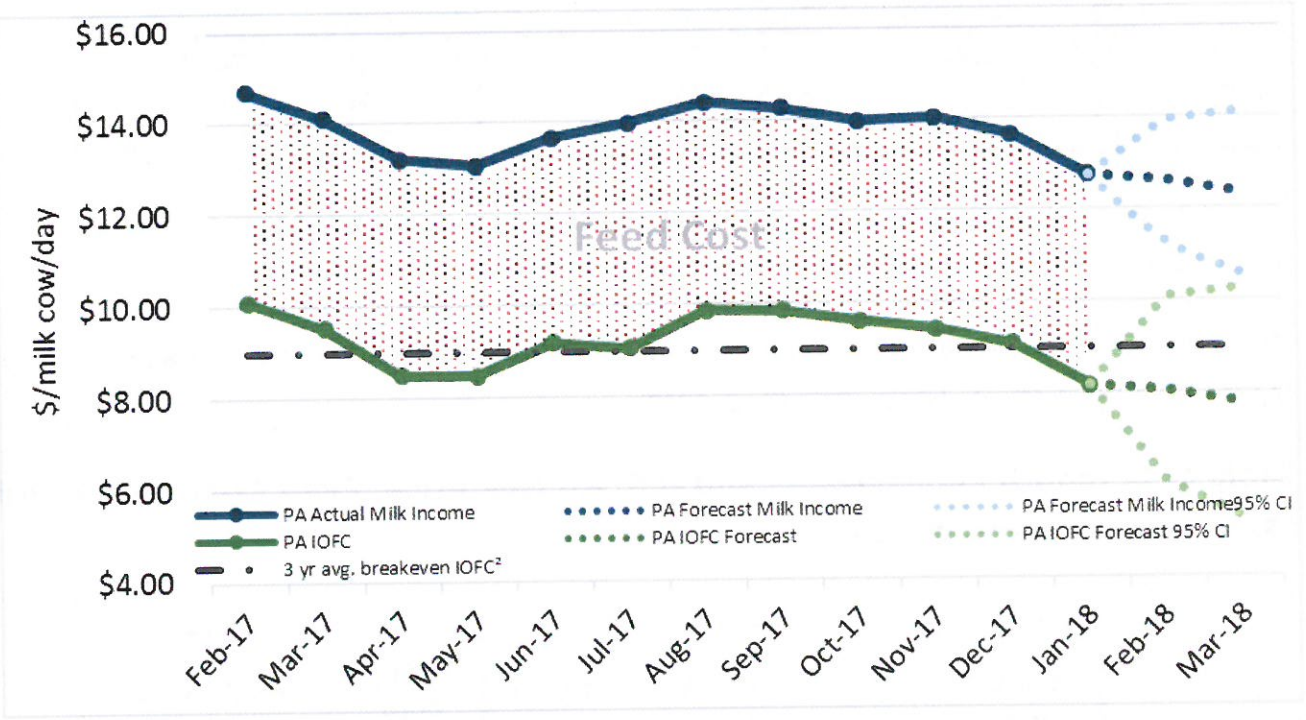
	PA All Milk Price	PA Feed Cost[1]	PA Milk Margin	*3 yr avg. breakeven Milk Margin[2]*	US All Milk Price	US Feed Cost[1]	US Milk Margin
Feb-17	$ 19.60	$ 6.12	$ 13.48	*$ 12.41*	$ 18.50	$ 4.81	$ 13.69
Mar-17	$ 18.80	$ 6.09	$ 12.71	*$ 12.41*	$ 17.30	$ 4.93	$ 12.37
Apr-17	$ 17.60	$ 6.28	$ 11.32	*$ 12.41*	$ 16.50	$ 5.17	$ 11.33
May-17	$ 17.40	$ 6.10	$ 11.30	*$ 12.41*	$ 16.70	$ 5.31	$ 11.39
Jun-17	$ 18.20	$ 5.97	$ 12.23	*$ 12.41*	$ 17.30	$ 5.23	$ 12.07
Jul-17	$ 18.60	$ 6.53	$ 12.07	*$ 12.41*	$ 17.30	$ 5.27	$ 12.03
Aug-17	$ 19.20	$ 6.06	$ 13.14	*$ 12.41*	$ 18.00	$ 5.01	$ 12.99
Sep-17	$ 19.00	$ 5.89	$ 13.11	*$ 12.41*	$ 17.80	$ 5.06	$ 12.74
Oct-17	$ 18.60	$ 5.80	$ 12.80	*$ 12.41*	$ 17.90	$ 5.13	$ 12.77

Nov-17	$ 18.70	$ 6.15	$ 12.55	$ 12.41	$ 18.10	$ 4.99	$ 13.11
Dec-17	$ 18.20	$ 6.08	$ 12.12	$ 12.41	$ 17.20	$ 5.04	$ 12.16
Jan-18	$ 17.00	$ 6.11	$ 10.89	$ 12.41	$ 16.10	$ 5.15	$ 10.95
Feb-18	$ 16.81	$ 6.08	$ 10.73	$ 12.41	$ 15.87	$ 5.14	$ 10.73
Mar-18	$ 16.44	$ 6.10	$ 10.34	$ 12.41	$ 15.44	$ 5.14	$ 10.30
12 mo. Avg.	$ 18.41	$ 6.10	$ 12.31		$ 17.39	$ 5.09	$ 12.30
12 mo. change	$ 1.05	$ (0.25)	$ 1.30		$ 0.86	$ 0.09	$ 0.76
% change	6.0%	-3.9%	11.8%		5.2%	1.9%	6.6%

[1]Based on corn, alfalfa hay, and soybean meal equivalents to produce 75 lbs. of milk (Bailey & Ishler, 2007)

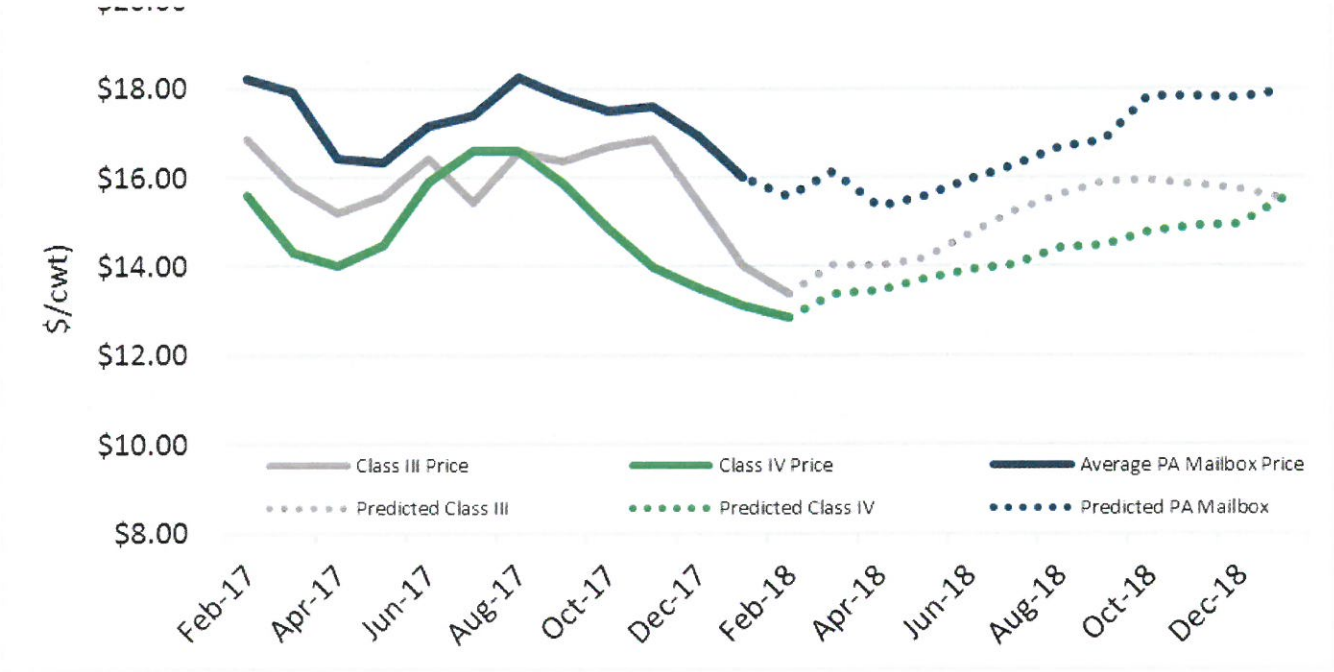
[2]The 3 year average actual Milk Margin breakeven in Pennsylvania from 2014-2016 was $12.41 ± $2.38 ($/cwt) (Beck, Ishler, Goodling, 2017).

Figure 1: 12 month PA Milk Income and Income over Feed Cost



[2]The 3 year average actual IOFC breakeven in Pennsylvania from 2014-2016 was $8.97 ± $1.76 ($/milk cow/day) (Beck, Ishler, Goodling, 2017).

Figure 2: 24 month Actual and Predicted* Class III, Class IV, and Pennsylvania Average Mailbox Price ($/cwt)



***Predicted values based on Class III and Class IV futures regression (Gould, 2018).**

Table 3: 24 month Actual and Predicted* Class III, Class IV, and Pennsylvania Average Mailbox Price ($/cwt)

Month	Class III Price	Class IV Price	Average PA Mailbox Price
Feb-17	$16.88	$15.59	$18.24
Mar-17	$15.81	$14.32	$17.91
Apr-17	$15.22	$14.01	$16.43
May-17	$15.57	$14.49	$16.32
Jun-17	$16.44	$15.89	$17.17
Jul-17	$15.45	$16.60	$17.40
Aug-17	$16.57	$16.61	$18.25
Sep-17	$16.36	$15.86	$17.83
Oct-17	$16.69	$14.85	$17.49
Nov-17	$16.88	$13.99	$17.61
Dec-17	$15.44	$13.51	*$16.95*

Month	Class III Price	Class IV Price	Average PA Mailbox Price
Jan-18	$14.00	$13.13	*$16.01*
Feb-18	$13.40	$12.87	*$15.57*
Mar-18	*$14.04*	*$13.38*	*$16.15*
Apr-18	*$14.00*	*$13.45*	*$15.34*
May-18	*$14.19*	*$13.72*	*$15.57*
Jun-18	*$14.71*	*$13.93*	*$15.94*
Jul-18	*$15.24*	*$14.05*	*$16.29*
Aug-18	*$15.61*	*$14.42*	*$16.66*
Sep-18	*$15.90*	*$14.47*	*$16.83*
Oct-18	*$15.95*	*$14.78*	*$17.82*
Nov-18	*$15.83*	*$14.92*	*$17.83*
Dec-18	*$15.75*	*$14.93*	*$17.79*
Jan-19	*$15.52*	*$15.54*	*$17.96*

**Italicized predicted values based on Class III and Class IV futures regression (Gould, 2018).*

To look at feed costs and estimated income over feed costs at varying production levels by zip code, check out the Penn State Extension Dairy Teams DairyCentsor DairyCents Proapps today.

Data sources for price data:

All Milk Price: Pennsylvania and U.S. All Milk Price (USDA, 2018)

Predicted Class III, Class IV, and Pennsylvania Mailbox Price (average of the Eastern and Western PA mailbox Price) (Gould, 2018)

Alfalfa Hay: Pennsylvania and U.S. monthly Alfalfa Hay Price (USDA, 2018)

Corn Grain: Pennsylvania and U.S. monthly Corn Grain Price (USDA, 2018)

Soybean Meal: Feed Price List (Ishler, 2018) and average of Decatur, Illinois Rail and Truck Soybean Meal, High Protein prices, National Feedstuffs (Gould, 2018).

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